
Calling Line Identification

Calling Line Identification (CLID) sends a telephone's designated number through the ISDN PRI network to the Digit Display on a receiving device. Both outgoing and incoming calls are supported. The CLID display lasts for the duration of the call.

CLID display is supported over Meridian 1 to the following switches:

- Meridian 1 and SL-100
- DMS-100 and DMS-250
- Meridian 1 tandem through AT&T 4ESS and AT&T 5ESS

The following devices, if equipped with a Digit Display, can receive and display a CLID number:

- Attendant consoles
- Meridian 1 telephones with Digit Display
- Digital telephones (M2317)
- Meridian 1 Touch Sets (M3000)
- Meridian 1 Display telephones
- ASCII terminals with an Add-on Data Module (ADM)
- M2008, M2016S, M2216ACD, M2616 when equipped with displays

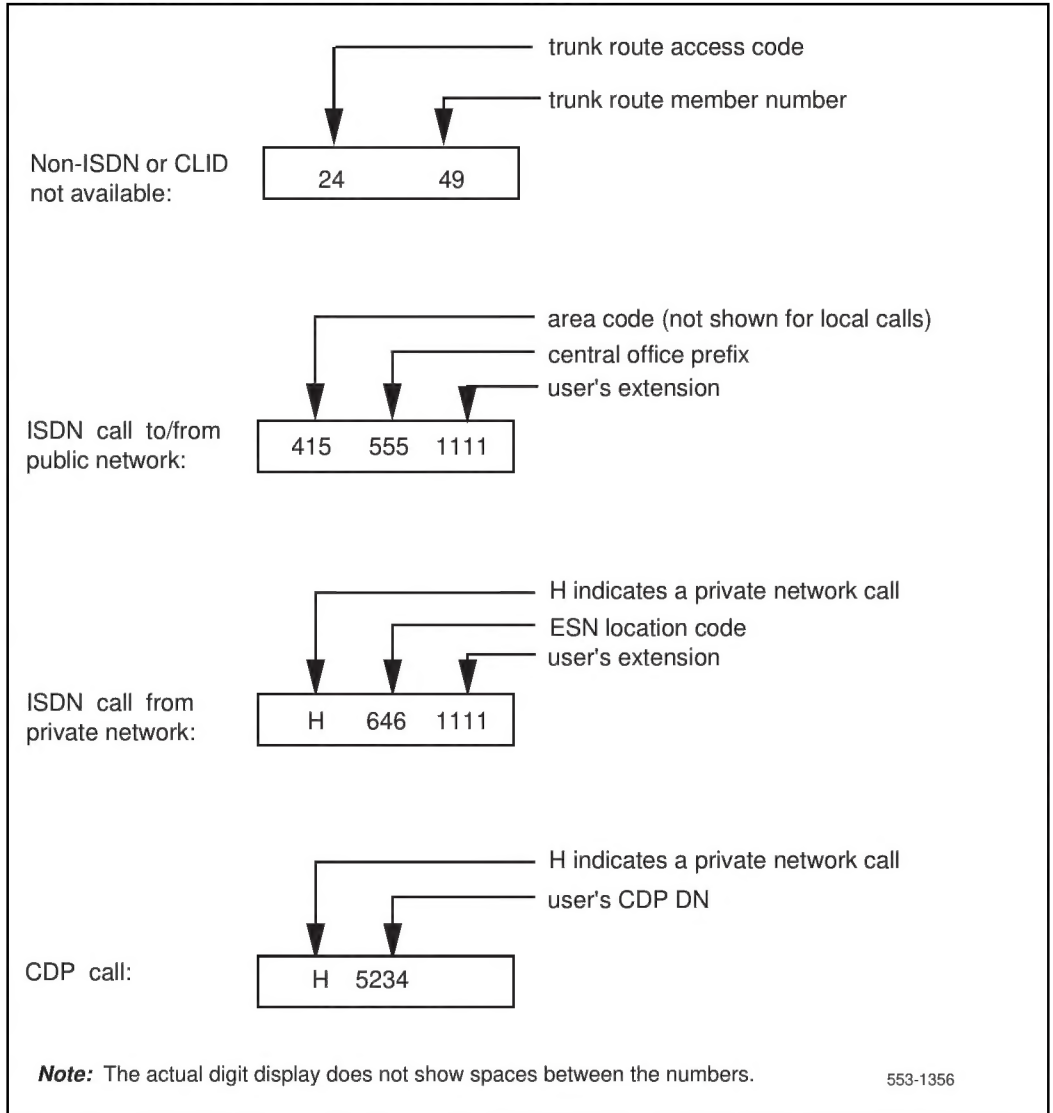
Display contents

Display contents are summarized below.

- If the CLID display is unavailable because the call was not routed on ISDN routes for the entire call, the trunk route access code and trunk route member number are displayed.
- For public networks, CLID displays the standard North American Numbering Plan 7- or 10-digit number, depending on the number dialed.
- For a private network over ESN, the CLID displays an “H” followed by xxxx yyyyy, where xxxx = a four digit Home Location Code (HLOC) and yyyy = a four digit DN.
- For a private network over CDP, the CLID displays a four digit LSC (Local Steering Code) followed by one of the following:
 - the extension’s trailing digits (forming the CDP DN) when CDP is equipped
 - the calling telephone’s extension

See Figure 24 for digit display formats for CLID.

Figure 24
Digit Display format for Calling Line Identification



Outgoing calls

The calling party number that is sent out with the call SETUP message on the D-channel is based on:

- the numbering plan (private or public);
- the customer option configured in the Customer Data Block (LD 15), either Prime Directory Number (PDN) or Listed Directory Directory Number (LDN);

Note: An attendant console can only be assigned an LDN.

- the class of service (COS) assigned to the set calling set.

If the numbering plan is private, the PDN is sent, regardless whether PDN or LDN is configured as the customer option.

If the numbering plan is public:

- if the customer option is set to LDN, then the set's Listed Directory Directory is sent;
- if the customer option is set to PDN, either the Prime Directory Number or Listed Directory Directory Number is sent, depending on the class of service (COS) assigned to the calling set in LD 10 (BCS Set Administration) or LD 11 (SL-1 and Digital Set Administration).

For private network calls, the calling party number consists of either the Electronic Switched Network (ESN) location code and the DN or the Coordinated Dialing Plan (CDP) DN. If the Prime DN is less than four digits, zeros are appended to create a four digit DN. If it is more than four digits, the last four numbers are used to identify the DN. For public network calls, it is the standard North American Numbering Plan seven or ten digit number.

CLID with SID/ANI

AT&T can pass the Service Identifier (SID) and Automatic Number Identification (ANI) from the originating network switch to the Meridian 1.

The SID is the number provided by the user (for example, a Meridian 1 switch) in the address digits field of the Calling Party Number. The ANI number is a customer billing number stored at a local switch or within the AT&T network.

If a customer subscribes to the AT&T services, either SID or ANI information is delivered on all incoming calls. The user can request that SID or ANI be provided on either an exclusive or preferred basis. Whether SID or ANI is requested, Meridian 1 CLID displays the digits passed in the Calling Party Number identification.

Note: AT&T's ANI is comparable to Northern Telecom's CLID.

CLID in CDR

If this feature is enabled, the CLID number is included in Call Detail Recording (CDR) records. This gives customers the calling telephone's ID, even through a tandem node. This information allows customers to charge the calling party for services rendered in connection with an incoming call. For example, calls to an attorney can be accurately charged to the client.

The CLID information in the Q.931 call SETUP message is added to all applicable CDR message types, in both TTY message format and the compressed binary formats for downstream processing. If the CLID information is not included in the SETUP message, it cannot be printed.

In the TTY output, the CLID information is printed on the second line, as shown in Table 31. The field is always 16 characters: the actual CLID digits, followed by Xs to total 16. For detailed information on CDR records, see *Call Detail Recording description and formats* (553-2631-100).

In the Electronic Switched Network (ESN), calls made from mains through the node can be tracked on CDR at the node. This eliminates the need for CDR hardware and software at all mains and allows an accurate billing of callers using the node's trunks, even when the calls are made from the attached mains. See *Meridian 1 system overview* (553-3001-100) for more information about ESN.

Table 31
Calling Line Identification number in the TTY output

Rec Type	Rec No	Cust No	OrigID	TerID	AuxID III.s.cc.uu	Date mm/dd	Time hh:mm	Duration hh:mm:s	Digits
N	001	05	DN499	A001000	027.1.02.1	06/28	10:14	00:00:20	95559124
			042	000	95552222xxxxxxxx				
N	001	04	T002001	DN5000		06/28	10:15	00:00:40	
									95552222xxxxxxxx
Note: The CLID field always displays 16 characters. The feature inserts an "x" for each missing character.									

Incoming Digit Conversion

Incoming Digit Conversion (IDC) is compatible with ISDN PRI. IDC allows the user to dedicate a translation table to a DID route so that the DNs received from the CO can be converted to related extension numbers within the Meridian 1. Each translation table is defined on a DID route basis. Digits dialed on ISDN calls with CLID are converted if IDC is active on that route.

Feature implementation

Basic PRI configuration must be performed before Calling Line Identification (CLID) is defined (see “Configuring PRI” on page 31).

CAUTION

Third-party software is not guaranteed if this feature is activated. If the third-party software does not recognize the CLID field, it may shut down.

Use LD17 to enable CLID.

Prompt	Response	Description
REQ	NEW CHG	Add or change existing data.
TYPE	PARM	Change system parameters.
...		
CLID	YES	Enable CLID.
...		

Use LD15 to configure CLID.

Prompt	Response	Description
REQ	NEW CHG	Add or change a customer
TYPE	CDB NET	Customer data block Networking Data (Release 21 gate opener)
CUST	0-99	Customer number
ISDN	YES	Change ISDN options
- PNI	1-32700	Private Network Identifier
...		
- PFX1	xxxx	Prefix (area) code for International PRI

Prompt	Response	Description
- PFX2	xxxx	Central Office Prefix for IPRA
- HNPA	100-999	Home Number Plan Area code
- HNXX	100-999	Prefix for Central Office
- HLOC	100-9999	Home Location Code (ESN)
- LSC	xxxx	Local steering code
- CNTP	LDN, (PDN)	Default for Calling Line ID
- RCNT	0-(5)	Maximum inter-node hops in a network redirection call

Use LD17 to allow CDR to be printed on the TTY terminal.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	ADAN	Action Device And Number.
- ADAN	CHG TTY xx	Change TTY terminal 0-15.
...		
- USER	CTY	Use the TTY for CDR records
...		

Use LD15 to allow CDR to be printed for the customer.

Prompt	Response	Description
REQ	NEW CHG	Add or change customer data
TYPE	CDB CDR	Customer data block CDR data (Release 21 gate opener)
CUST	0-99	Customer number
CDR	YES	Change CDR options The CDR prompt appears if CDB was entered in response to the TYPE prompt - it will not appear if CDR was entered.
PORT	0-15	CDR port number
...		

Use LD16 to allow CDR records in the Trunk Route Data Block.

Prompt	Response	Description
REQ	NEW CHG	Add new data, or change existing data
TYPE	RDB	Route Data Block
CUST	0-99	Customer number
ROUT	0-511	Route number
...		
CDR	YES	Generate CDR records
- INC	YES	CDR records generated on incoming calls
...		
- OAL	YES	CDR records generated on outgoing calls
...		

Enhanced Malicious Call Trace

A caller using a set with Malicious Call Trace (MCT) allowed can, during an established call, request that the call trace record be printed. The user has the option of sending an alarm to the central office. The feature is available for all attendants and all sets other than ISDN BRI.

Beginning with X11 release 20, enhancements to this feature include:

- a special signal (hook flash and optional digit string) that can be sent to the central office
- flexible alarm duration (0 to 15 minutes)
- optional voice recording of malicious calls. A printed record shows the recorder trunk, recorder route, and member number.
- the ability to send a print record on any SDI port that has MCT identified as a user
- a format change to provide information about the type of call (external or internal)

For information on implementing this feature, see *X11 features and services* (553-3001-305).